

**2006 CCRTS**  
**THE STATE OF THE ART AND THE STATE OF THE PRACTICE**

**INTENTION AWARENESS FOR COLLECTIVE SENSEMAKING**

C2 Concepts and Organizations, Cognitive Domain Issues, Social Domain Issues

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**Abstract:**

The application of Situation Awareness Theory in Command and Control systems focuses on spatiotemporal feedback and communications. The paradigm of spatiotemporal-oriented system design is fundamentally incomplete even in the absence of latency in communications. Latency of meaning in real-time communications remains a challenge simply because sensemaking resides in cognitive realities. Engineering a concept like sensemaking, or more generally, cognitive states and processes, in Command and Control systems proved an exigent endeavor due to abundance, not scarcity, of cognitive models. In this paper, a framework that integrates reflexive theory, intention awareness, and sensemaking in collective symbiotic structures offers a unified approach to address challenges in soldiers' ability to make sense of their environment. Command and Control systems are becoming less dependent on human interaction and therefore, collective sensemaking and rationality. These systems are more dependent on computers and information processing systems and consequently creating new challenges to human sensemaking. Human intention as a cognitive construct is a cornerstone in this framework. Residing at the core of human cognitive realities, intentions act as automata that organize cognitive functions into a hierarchy of actions. Symbiotic systems, human and human-like information processing systems, exhibit varying modes of collective structures, organization, and action interdependence.